

## Implementation Challenges of the Merdeka Curriculum in Elementary Schools: A CIPP-Based Systematic Literature Review (2023–2025)

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Articles Information	Abstract
<p><b>Received</b> : 26-01-2026</p> <p><b>Revised R1</b> : 12-03-2026</p> <p><b>Revised R2</b> : 08-04-2026</p> <p><b>Accepted</b> : 15-04-2026</p> <p><b>Published</b> : 30-04-2026</p>	<p>The Kurikulum Merdeka is an educational innovation designed to enhance learning flexibility by emphasizing essential competencies, literacy, numeracy, and the Pancasila Student Profile. However, its implementation at the elementary school level remains uneven and faces significant challenges. This study synthesizes findings from literature published between 2023 and 2025 using the CIPP (Context, Input, Process, Product) evaluation framework. The review identifies key issues, including disparities in teacher readiness, limited instructional resources, and inconsistent understanding of Merdeka Belajar principles across schools. Although several studies report improvements in literacy and numeracy outcomes, these gains are not evenly distributed, and notable differences persist between lower and upper grade classrooms. Principal leadership and teacher motivation emerged as critical enabling factors, while insufficient professional development, limited teaching modules, and inadequate technological infrastructure were major constraints. The study recommends strengthening teacher capacity through contextual, practice-oriented training, improving infrastructure, and implementing continuous supervision and mentoring to optimize Kurikulum Merdeka implementation in elementary education.</p> <p><b>Keywords:</b> Kurikulum Merdeka; CIPP Evaluation; Systematic Literature Review; Curriculum Reform Implementation; Elementary Education; Teacher Readiness.</p>

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## 1. INTRODUCTION

The curriculum is a fundamental component of an education system as it determines the direction of learning, the competencies to be achieved, and the quality of the teaching and learning process (Print, 2015; Ornstein & Hunkins, 2018). In many countries, curriculum reform has become an important strategy for responding to rapid social, technological, and economic changes that shape the learning needs of 21st-century students. In the Indonesian context, curriculum change has frequently been implemented as an adaptive effort to align educational practices with global developments and national priorities (Rusman, 2017).

One of the most recent reforms is the introduction of the Kurikulum Merdeka (Merdeka Curriculum) in 2021–2022. The policy emerged partly as a response to learning disruptions caused by the COVID-19 pandemic and as an attempt to simplify the previous curriculum, which was widely criticized for being overly dense and less responsive to students' diverse learning needs (Kemendikbudristek, 2022). The Merdeka Curriculum introduces several key innovations, including flexible learning structures, differentiated instruction, strengthened formative assessment, and the integration of the *Projek Penguatan Profil Pelajar Pancasila (P5)* to support character development and interdisciplinary learning (Firman, 2022; Kemendikbudristek, 2022). These reforms aim to enhance both cognitive competencies and student autonomy in learning (Ariani & Hadi, 2023).

Despite these policy aspirations, the implementation of the Merdeka Curriculum has generated varied outcomes across schools. By 2023, approximately 74% of elementary schools had adopted the curriculum through different implementation pathways, including Independent Learning, Independent Change, and Independent Sharing (Kemendikbudristek, 2023). Several empirical studies have reported improvements in literacy and numeracy outcomes following the adoption of formative assessment and more flexible learning approaches (Hastuti & Widodo, 2023). However, these improvements are not uniformly observed across educational contexts. Schools with limited facilities, insufficient teacher training, and weak institutional support often experience difficulties in translating curriculum policy into classroom practice (Putra, 2023; Sari & Nugroho, 2022).

From a policy implementation perspective, educational reforms frequently encounter challenges related to institutional capacity, leadership support, and teacher professional readiness. Policy implementation theory suggests that the success of curriculum reform depends not only on policy design but also on the capacity of local institutions and educators to interpret and enact the policy in real classroom contexts (Fullan, 2007; Spillane, 2004). In the case of the Merdeka Curriculum, disparities in teacher readiness remain a major concern. Many teachers continue to face difficulties in designing differentiated learning activities, developing teaching modules aligned with the curriculum framework, and authentically integrating P5 projects into classroom instruction (Rohmah, 2023). Furthermore, differences in infrastructure availability and school management systems further influence implementation quality, particularly in elementary schools located in frontier, outermost, and disadvantaged (3T) regions (Yuniarti, 2022).

Although a growing number of empirical studies have examined various aspects of Merdeka Curriculum implementation, most of these studies are context-specific and limited to particular schools or regions. Consequently, the existing literature remains fragmented and does not yet provide a comprehensive synthesis of implementation challenges across different educational contexts. To date, few studies have systematically integrated these findings using a structured evaluation framework that allows a holistic examination of policy implementation from planning inputs to learning outcomes.

To address this gap, the present study conducts a systematic literature review of recent studies examining the implementation of the Kurikulum Merdeka in elementary schools. The review applies the CIPP (Context, Input, Process, Product) evaluation model developed by Daniel L. Stufflebeam (2003), which is widely used for evaluating educational programs because it enables a comprehensive analysis of contextual conditions, implementation processes, and program outcomes.

Specifically, this study aims to synthesize existing research in order to provide a structured understanding of the factors influencing the implementation of the Kurikulum Merdeka in elementary education. The review is guided by the following research questions:

- (1) RQ1. What contextual, institutional, and pedagogical factors influence the implementation of the Merdeka Curriculum in elementary schools?
- (2) RQ2. What challenges and outcomes have been reported in the implementation of the Merdeka Curriculum in elementary education?

## **2. LITERATURE REVIEW**

### **2.1. Merdeka Curriculum in Elementary Schools**

The Merdeka Curriculum is a competency-based curriculum that provides autonomy for schools and teachers to adapt learning to students' socio-cultural contexts and learning needs (Kemendikbudristek, 2022). At the elementary school level, this curriculum emphasizes the simplification of Learning Outcomes (LOs), flexibility in the development of instructional resources, and student-centered learning practices (Ariani & Hadi, 2023). Its primary objective is to foster essential competencies and character development through meaningful learning experiences (Firman, 2022).

Substantively, the implementation of the Merdeka Curriculum in elementary schools focuses on several key aspects. First, project-based learning through the Pancasila Student Profile Strengthening Project (P5), which aims to cultivate character, creativity, collaboration, and social awareness (Kemendikbudristek, 2022). Second, integrated thematic learning that enables students to develop holistic understanding through the integration of multiple subject areas (Sani, 2021). Third, differentiated instruction, which involves adjusting strategies, materials, and assessment based on students' interests, readiness, and learning profiles (Tomlinson, 2014; Indrawati, 2023). Fourth, the strengthening of literacy and numeracy through contextual activities oriented toward real-world problem solving (Hastuti & Widodo, 2023). Fifth, the implementation of continuous formative assessment that provides ongoing feedback to improve students' learning processes (Brookhart, 2017).

Nevertheless, numerous studies indicate that the implementation of the Merdeka Curriculum in elementary schools continues to face various challenges. Many teachers are not yet accustomed to designing and applying differentiated instruction and still experience difficulties in developing teaching modules aligned with the Learning Outcomes and learning progression pathways (Putra, 2023; Rohmah, 2023). In addition, formative assessment has not been optimally utilized as a basis for instructional decision-making due to limited understanding of authentic assessment techniques (Sari & Nugroho, 2022). Infrastructure availability, digital device support, and school management capacity also contribute to variations in school readiness to implement the Merdeka Curriculum, particularly in schools located in resource-limited areas (Yuniarti, 2022).

These findings indicate that the implementation of the Merdeka Curriculum depends not only on curriculum design but also on teacher readiness, school capacity, and adequate policy support. Therefore, a comprehensive evaluation mechanism is required to identify implementation barriers, effectiveness, and development opportunities in the application of the curriculum at the elementary school level.

## **2.2. The CIPP Evaluation Model**

The CIPP evaluation model is one of the program evaluation approaches developed by Stufflebeam (2003) to assess program effectiveness in a comprehensive manner. This model consists of four main components—Context, Input, Process, and Product—each of which serves to provide information for decision-making at every stage of program implementation (Alkin & Christie, 2004).

The Context component evaluates needs, problems, and the alignment between program objectives and environmental conditions, thereby serving as a basis for determining relevant and appropriate goals (Stufflebeam, 2003). In the context of implementing the Merdeka Curriculum in elementary schools, context evaluation includes an analysis of school readiness, student characteristics, and social and geographical conditions that influence the learning process (Ariani & Hadi, 2023).

The Input component evaluates the strategies, resources, and planning employed to achieve program objectives, including teacher competencies, facilities and infrastructure, teaching modules, and school managerial support (Fitzpatrick, Sanders, & Worthen, 2011). Input analysis in the implementation of the Merdeka Curriculum plays a crucial role in examining the feasibility of instructional strategies, the adequacy of teacher training, and the readiness of supporting resources.

The Process component assesses the actual implementation of the program in practice, including obstacles, gaps, and adaptations that occur during execution (Stufflebeam & Shinkfield, 2007). Process evaluation in the Merdeka Curriculum encompasses how teachers implement differentiated instruction, carry out P5 projects, utilize formative assessment, and manage classroom dynamics.

The Product component evaluates program outcomes and impacts, both in the short and long term, such as student learning achievement, improvements in literacy and numeracy, behavioral changes, and overall instructional effectiveness (Fitzpatrick et al., 2011). In the Merdeka Curriculum, product evaluation enables researchers to assess the extent to which curriculum objectives are achieved and whether its implementation produces outcomes consistent with expectations.

The CIPP model is widely applied in educational research due to its comprehensive nature and its ability to provide a holistic picture of program effectiveness as well as evidence-based recommendations for decision-making (Madaus, Scriven, & Stufflebeam, 2017). Therefore, this approach is highly relevant for systematically and in-depth analyzing the challenges of implementing the Merdeka Curriculum in elementary schools.

### 3. METHOD

#### 3.1. Research Design and Review Procedure

This study employed a systematic literature review (SLR) to synthesize empirical findings related to the implementation of the Kurikulum Merdeka in elementary schools. The review approach was selected because it enables researchers to systematically collect, evaluate, and integrate evidence from multiple studies in order to identify common patterns, challenges, and outcomes in curriculum implementation. The review procedure followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure transparency, replicability, and methodological rigor.

The analytical framework used in this study was the CIPP (Context, Input, Process, Product) evaluation model, which allows a comprehensive examination of educational programs from contextual conditions, supporting resources, implementation processes, and learning outcomes. Through this framework, the selected studies were categorized and analyzed to identify key factors influencing the implementation of the Merdeka Curriculum in elementary education.

#### 3.2. Search Strategy

The literature search was conducted across several academic databases to obtain comprehensive and credible sources. The databases included Scopus, ERIC, Google Scholar, and national journals indexed in SINTA, supplemented by relevant government policy documents and curriculum guidelines related to the Merdeka Curriculum. The search process was conducted between January and February 2025 using combinations of keywords and Boolean operators to capture studies relevant to curriculum implementation. The main search string used in this review was: ("*Merdeka Curriculum*" OR "*Kurikulum Merdeka*") AND ("*elementary school*" OR "*primary education*" OR "*sekolah dasar*") AND ("*implementation*" OR "*curriculum reform*" OR "*education policy*"). Additional searches were performed using related terms such as "Pancasila Student Profile", "P5 project", "differentiated learning", and "formative assessment" to capture studies closely associated with the implementation of the Merdeka Curriculum. The search initially identified 67 records across all databases.

#### 3.3. Study Selection Procedure

The study selection followed a PRISMA-based screening procedure consisting of several stages: identification, screening, eligibility assessment, and final inclusion. The overall selection process is illustrated in Figure 1, which presents the PRISMA flow diagram of the literature review procedure.

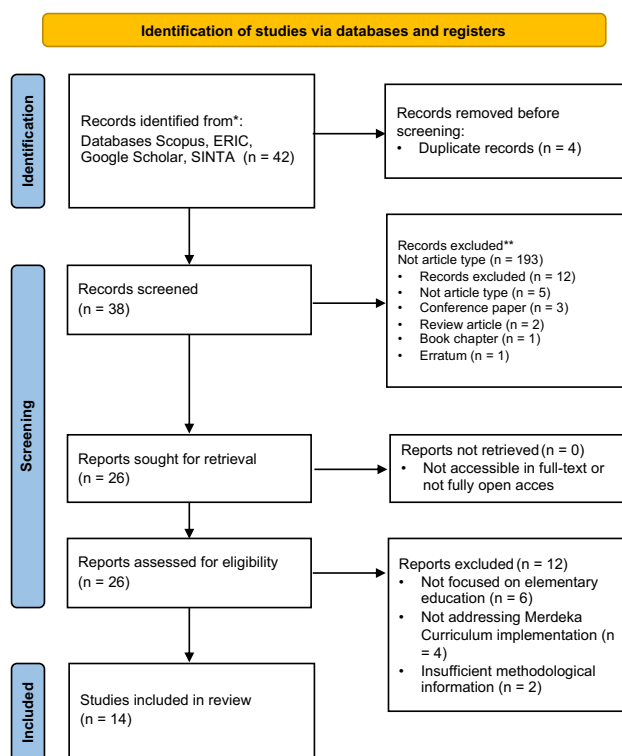


Figure 1. Prisma flow diagram.

The initial search across the selected databases identified 42 records related to the topic of Merdeka Curriculum implementation. After removing duplicate publications and unrelated records, 38 articles remained for title and abstract screening. During this stage, studies that did not address elementary education or did not examine curriculum implementation were excluded. A total of 26 articles were then assessed through full-text review to determine their relevance and methodological adequacy. Based on the predefined inclusion and exclusion criteria, 14 studies were considered eligible and included in the final synthesis. These selected studies represent empirical research examining various aspects of Merdeka Curriculum implementation in elementary education.

### 3.4. Inclusion and Exclusion Criteria

To ensure the relevance and credibility of the reviewed literature, this study applied predefined inclusion and exclusion criteria. These criteria were used to systematically determine which studies were eligible for inclusion in the review and which studies should be excluded from the analysis. The inclusion and exclusion criteria applied in this study are summarized in Table 1.

Table 1. Inclusion and Exclusion Criteria for Literature Selection

Criteria	Inclusion	Exclusion
Publication Year	Studies published between 2018–2025	Studies published before 2018
Research Focus	Studies examining implementation of the Merdeka Curriculum or related instructional practices in elementary education	Studies not related to Merdeka Curriculum implementation or elementary education

Publication Type	Peer-reviewed journal articles, including national journals indexed in SINTA and international journals indexed in Scopus, as well as credible academic publications	Opinion articles, editorials, essays, or non-academic publications
Language	Studies written in Indonesian or English	Studies written in other languages
Accessibility	Publications available in full-text format, allowing detailed analysis of research design, methodology, and findings	Publications available only as abstracts or incomplete reports
Methodological Clarity	Studies providing clear research objectives, methodology, and findings	Studies with insufficient methodological description or unclear research procedures

The application of these criteria ensured that only relevant, methodologically sound, and empirically grounded studies were included in the review. By applying a structured screening process, the selected literature provides a reliable basis for analyzing the implementation challenges and outcomes of the Merdeka Curriculum in elementary education.

### 3.5. Quality Appraisal and Data Extraction

The methodological quality of the selected studies was assessed using a CASP-based (Critical Appraisal Skills Programme) evaluation checklist. The appraisal focused on several methodological aspects, including clarity of research objectives, appropriateness of research design, transparency of data collection procedures, and consistency between analysis and conclusions. Only studies categorized as having moderate to high methodological quality were included in the final synthesis. This process helped ensure the reliability and credibility of the findings synthesized in the review. Data extraction was conducted using a structured matrix containing the following elements: author, year of publication, research method, research focus, and key findings. To enhance reliability, the coding and categorization process was conducted by two independent reviewers. Any disagreements during the coding process were resolved through discussion until consensus was reached. The inter-coder agreement reached 0.85, indicating acceptable analytical reliability.

### 3.6. Data Analysis

The extracted data were analyzed using content analysis based on the four dimensions of the CIPP evaluation model: Context, Input, Process, and Product. This analytical approach enabled the systematic identification of factors influencing curriculum implementation, including policy context, institutional capacity, teacher readiness, instructional practices, and reported learning outcomes. By organizing the findings within the CIPP framework, the analysis provides a structured understanding of both the enabling factors and challenges associated with the implementation of the Merdeka Curriculum in elementary schools.

### 3.7. Literature Summary

A summary of the 14 selected studies related to the implementation of the Merdeka Curriculum in

elementary schools is presented in Table 2, which includes information on authors, research methods, key findings, and the corresponding CIPP evaluation category.

**Tabel 2.** Matrix of Literature Summary on the Implementation of the Merdeka Curriculum in Elementary Schools

No	Author(s) & Year	Research Title	Method	Key Findings	CIPP Category
1	Hastuti & Widodo (2023)	Implementasi Kurikulum Merdeka pada Literasi SD	Kualitatif	Literasi meningkat, namun ketimpangan antarwilayah masih terjadi	Product
2	Rohmah (2023)	Kendala Guru dalam Penyusunan Modul Ajar Kurikulum Merdeka	Studi Kasus	Guru kesulitan diferensiasi dan pemetaan CP	Input / Process
3	Putra (2023)	Kesiapan Guru SD dalam Implementasi Kurikulum Merdeka	Survei	Kesiapan guru bervariasi, dipengaruhi pelatihan dan kepemimpinan	Context / Input
4	Sari & Nugroho (2022)	Implementasi Asesmen Formatif dalam Kurikulum Merdeka	Mixed Methods	Asesmen formatif belum optimal dan belum konsisten	Process
5	Yuniarti (2022)	Implementasi Kurikulum Merdeka di Daerah 3T	Kualitatif	Keterbatasan sarana dan teknologi menjadi hambatan utama	Context / Input
6	Ariani & Hadi (2023)	Analisis Pelaksanaan P5 di SD	Kualitatif	Praktik P5 beragam, tergantung komitmen sekolah	Process / Product
7	Pratama & Lestari (2024)	Dampak Kurikulum Merdeka terhadap Numerasi Siswa SD	Kuantitatif	Terdapat peningkatan numerasi, namun tidak signifikan di semua sekolah	Product
8	Kurniawan (2022)	Peran Kepala Sekolah dalam Implementasi Kurikulum Merdeka	Kualitatif	Kepemimpinan kepala sekolah memperkuat keberhasilan implementasi	Context / Process
9	Dewi & Saputra (2023)	Diferensiasi Pembelajaran dalam Kurikulum Merdeka di SD	Studi Kasus	Guru memahami konsep, namun praktik masih terbatas	Input / Process
10	Hidayat & Ningsih (2023)	Persepsi Guru terhadap Kurikulum Merdeka	Survei	Persepsi positif, namun dibatasi beban administrasi	Context
11	Susanto (2022)	Implementasi Pembelajaran Tematik pada Kurikulum Merdeka	Kualitatif	Integrasi tema belum sepenuhnya kontekstual	Process
12	Amelia & Putri (2024)	Tantangan Implementasi Kurikulum Merdeka Pasca Pandemi	Kualitatif	Adaptasi guru masih berlangsung, perlu pendampingan berkelanjutan	Process
13	Fauzi & Karim (2023)	Pemanfaatan Platform Merdeka Mengajar	Mixed Methods	PMM membantu guru, tetapi pemanfaatannya belum maksimal	Input / Process
14	Lestari et al. (2024)	Dampak Kurikulum Merdeka terhadap Karakter Pelajar Pancasila	Kualitatif	Nilai karakter berkembang melalui P5, namun belum terukur sistematis	Product

## 4. RESULTS AND DISCUSSION

The findings of the systematic literature review were synthesized using structured thematic analysis guided by the CIPP (Context, Input, Process, Product) evaluation framework. Instead of presenting findings study-by-study, the results were organized based on recurring themes identified across the selected studies. Frequency mapping was also used to identify dominant implementation patterns reported in the literature.

### 4.1. RQ1: Factors Influencing the Implementation of the Merdeka Curriculum in Elementary Schools

The first research question examines the contextual, institutional, and pedagogical factors influencing the implementation of the Kurikulum Merdeka in elementary education. The analysis was conducted using thematic synthesis guided by the Context, Input, and Process components of the CIPP evaluation framework. Rather than describing individual studies separately, the findings were synthesized to identify dominant implementation patterns across the reviewed literature. The analysis indicates that the implementation of the Merdeka Curriculum is shaped by three interrelated factors: contextual conditions of schools, institutional capacity and resources, and instructional practices at the classroom level. Table 3 presents the frequency distribution of implementation factors reported in the reviewed studies.

**Table 3.** Frequency of Implementation Factors Identified in Reviewed Studies

CIPP Category	Key Factor	Number of Studies (n=14)
Context	Regional disparity between urban and 3T schools	6
Context	Institutional readiness and policy understanding	5
Input	Teacher readiness and professional competence	10
Input	Availability of learning resources and infrastructure	8
Input	School leadership and managerial support	6
Process	Implementation of differentiated instruction	7
Process	Use of formative assessment practices	6
Process	Supervision, mentoring, and professional collaboration	5

The frequency mapping indicates that teacher readiness and professional competence represent the most frequently reported factor influencing curriculum implementation, followed by learning resource availability and instructional practice challenges.

#### 4.1.1. Context Factors

Contextual factors refer to the broader environmental and institutional conditions influencing the implementation of the Merdeka Curriculum. The review identified regional disparities and institutional readiness as two major contextual issues reported in the literature. Approximately six studies reported disparities between schools located in urban areas and those in disadvantaged, frontier, and outermost (3T)

regions. Schools in urban areas generally demonstrate stronger readiness to implement curriculum reforms due to better infrastructure availability, access to professional development opportunities, and more stable school management systems. In contrast, schools in disadvantaged regions often encounter structural limitations, including inadequate internet connectivity, limited digital learning facilities, and restricted access to curriculum training programs.

In addition to geographical disparities, variations in institutional understanding of the Merdeka Curriculum policy were also identified as a contextual factor influencing implementation. Several studies noted that differences in teachers' and school leaders' interpretations of the principles of Merdeka Belajar often lead to inconsistent implementation practices. In some schools, curriculum reform has encouraged the adoption of more student-centered learning approaches. However, other schools continue to implement instructional practices similar to those used in the previous 2013 Curriculum, suggesting partial or superficial policy adoption. These findings align with broader research on education policy implementation, which emphasizes that the success of curriculum reform depends not only on policy design but also on institutional readiness and contextual capacity at the local level.

#### **4.1.2. Input Factors**

Input factors refer to the institutional resources and capacities that support curriculum implementation. Among the reviewed studies, teacher readiness and professional competence emerged as the most frequently reported factor, appearing in 10 of the 14 studies. Many studies indicate that teachers generally demonstrate positive attitudes toward the Merdeka Curriculum but still experience difficulties in translating curriculum principles into classroom practice. In particular, teachers report challenges in designing differentiated learning activities, developing contextual teaching modules, and implementing formative assessment strategies aligned with competency-based learning objectives.

Another important input factor concerns the availability of learning resources and infrastructure, reported in eight studies. Schools located outside urban areas often face limitations in access to digital platforms, learning modules, and facilities supporting project-based learning activities. These limitations reduce the capacity of schools to fully implement the flexible and student-centered learning approaches promoted by the Merdeka Curriculum. In addition, school leadership and managerial support were identified as an enabling factor in six studies. Schools led by proactive and adaptive principals tend to demonstrate stronger implementation readiness. Effective school leaders often facilitate teacher collaboration, provide opportunities for professional development, and encourage experimentation with innovative teaching practices aligned with curriculum reform.

#### **4.1.3. Process Factors**

Process factors refer to how the curriculum is implemented in classroom practices and school-level instructional processes. The review indicates that several pedagogical components of the Merdeka Curriculum remain challenging to implement consistently. One of the most frequently reported issues

concerns the implementation of differentiated instruction, identified in seven studies. Teachers often experience difficulties in identifying students' learning readiness, interests, and learning profiles, which are necessary prerequisites for designing differentiated learning activities. As a result, some classrooms continue to apply relatively uniform instructional approaches despite the curriculum's emphasis on personalized learning.

Another recurring issue involves the implementation of formative assessment, reported in six studies. Although formative assessment is a central component of the Merdeka Curriculum, several studies note that teachers still face difficulties in conducting continuous assessment and using assessment results to guide instructional adjustments. The review also identified the importance of supervision, mentoring, and professional collaboration, reported in five studies. Schools that receive sustained mentoring and professional support demonstrate more consistent curriculum implementation compared to schools that rely solely on initial training programs. However, the literature suggests that systematic mentoring mechanisms remain uneven across regions and school contexts.

The synthesis of contextual, institutional, and pedagogical factors identified across the reviewed studies suggests that the implementation of the Merdeka Curriculum is shaped by the interaction between contextual conditions, institutional capacity, and instructional practices. These factors collectively influence the effectiveness of curriculum implementation and ultimately affect learning outcomes in elementary education. The conceptual relationship among these factors is illustrated in Figure 2.



Figure 2. Conceptual Model of Merdeka Curriculum Implementation Factors

## 4.2. RQ2: Challenges and Outcomes of Merdeka Curriculum Implementation in Elementary Education

The second research question examines the major implementation challenges and reported outcomes associated with the Merdeka Curriculum in elementary education. The analysis corresponds primarily to the Product dimension of the CIPP framework while also reflecting interactions with contextual, institutional, and pedagogical factors identified in RQ1. The synthesis of the reviewed studies indicates that the outcomes of curriculum implementation are heterogeneous and context-dependent, reflecting differences in teacher capacity, resource availability, and institutional support. Rather than presenting individual study findings separately, the results were synthesized to identify dominant patterns of implementation challenges and reported learning outcomes across the reviewed literature.

### 4.2.1. Major Implementation Challenges

Across the reviewed studies, three dominant categories of implementation challenges were identified: teacher capacity constraints, resource limitations, and institutional support gaps. Table 4 summarizes the frequency of implementation challenges reported in the literature.

Table 4. Frequency of Implementation Challenges Identified in Reviewed Studies

Category	Key Challenge	Number of Studies (n=14)
Teacher Capacity	Difficulty implementing differentiated instruction	7
Teacher Capacity	Limited competence in formative assessment	6
Resources	Limited access to learning modules and digital infrastructure	6
Institutional Support	Limited mentoring and supervision systems	5
Institutional Support	Variation in school leadership capacity	4

The findings indicate that teacher capacity constraints represent the most frequently reported implementation challenge, appearing in approximately half of the reviewed studies. Although teachers generally express positive attitudes toward the Merdeka Curriculum, many studies report that teachers require sustained professional support to effectively implement new pedagogical practices. One recurring issue concerns teachers' ability to design differentiated learning activities aligned with students' learning readiness and interests. Several studies note that teachers often lack practical experience in diagnosing student learning profiles, which limits their ability to fully implement personalized learning approaches.

Another widely reported challenge relates to the implementation of formative assessment practices. Although the Merdeka Curriculum emphasizes continuous assessment for learning, teachers often encounter difficulties in designing assessment instruments and interpreting assessment results to improve instructional strategies. In addition to teacher-related challenges, resource constraints also influence curriculum implementation. Several studies highlight that limited access to digital infrastructure, teaching modules, and project-based learning facilities reduces schools' capacity to implement flexible and student-

centered learning practices. Institutional factors further shape implementation outcomes. Schools that lack structured mentoring systems and regular supervision tend to experience slower adaptation to curriculum reform. In contrast, schools with active leadership and collaborative teacher communities demonstrate stronger implementation capacity.

#### **4.2.2. Reported Learning Outcomes**

The reviewed studies report mixed outcomes associated with the implementation of the Merdeka Curriculum. While some studies indicate improvements in student learning outcomes, the overall evidence suggests that these improvements are not uniformly observed across educational contexts. Approximately five studies report improvements in literacy and numeracy achievement following the adoption of the Merdeka Curriculum, particularly in schools that actively implement formative assessment and project-based learning approaches. These improvements are often attributed to more flexible instructional strategies and increased student engagement during learning activities.

However, several studies emphasize that the positive effects of the curriculum are moderate and context-dependent. Differences in teacher training quality, school leadership support, and learning resource availability often influence the extent to which curriculum reforms translate into measurable learning gains. In addition to academic outcomes, several studies highlight the potential impact of the Pancasila Student Profile Strengthening Project (P5) on students' character development, collaboration skills, and problem-solving abilities. Project-based learning activities are reported to encourage interdisciplinary learning and active student participation. Nevertheless, the literature also indicates that the impact of P5 activities remains difficult to evaluate systematically due to variations in implementation approaches across schools.

The evidence also reveals some contradictory findings. While several studies report improvements in student engagement and learning motivation, other studies indicate that teachers continue to rely on traditional instructional practices due to limited training and heavy administrative workloads. These inconsistencies suggest that curriculum outcomes depend not only on policy adoption but also on the capacity of schools and teachers to operationalize curriculum principles in classroom practice.

#### **4.2.3. Cross-Study Synthesis**

Taken together, the reviewed studies suggest that the outcomes of the Merdeka Curriculum implementation cannot be interpreted solely as direct effects of curriculum policy. Instead, the evidence indicates that curriculum outcomes emerge from the interaction between policy design, institutional capacity, and instructional practice. Schools with stronger institutional capacity—characterized by supportive leadership, access to professional development, and adequate learning resources—tend to demonstrate more consistent implementation and more positive learning outcomes. Conversely, schools operating under resource constraints often experience partial or uneven curriculum implementation.

These findings are consistent with broader research on education reform and policy implementation, which emphasizes that curriculum change is a complex process requiring sustained institutional support,

teacher capacity development, and contextual adaptation at the school level. The synthesis suggests that the Merdeka Curriculum has the potential to support improvements in learning and student development. However, the effectiveness of the policy remains contingent upon the alignment between curriculum design, teacher readiness, and institutional support systems within schools.

### **4.3. Discussion**

The synthesis of the reviewed studies indicates that the implementation of the Kurikulum Merdeka in elementary education is shaped by the interaction between contextual conditions, institutional capacity, and pedagogical practices. Curriculum reform policies rarely operate as isolated interventions; rather, their success depends on the readiness of local institutions to interpret and implement policy changes within classroom contexts (Fullan, 2007; Spillane, 2004). The findings of this review reveal three dominant patterns of implementation challenges: structural disparity, institutional capacity limitations, and pedagogical adaptation constraints.

#### ***4.3.1. Structural Disparities in Implementation Context***

One of the most consistently reported issues concerns regional disparities in school readiness. Six of the fourteen reviewed studies highlight differences between schools located in urban areas and those in disadvantaged, frontier, and outermost (3T) regions. Schools with stronger infrastructure, access to digital technology, and stable institutional management demonstrate higher readiness to implement the Merdeka Curriculum compared to schools operating under resource constraints (Yuniarti, 2022; Hastuti & Widodo, 2023).

These findings reflect a broader pattern commonly observed in education policy implementation, where national curriculum reforms often produce uneven outcomes due to variations in local institutional capacity (Fullan, 2007). Educational policies designed at the national level frequently encounter implementation challenges when local institutions lack sufficient resources, organizational support, or professional capacity to operationalize policy directives (Mukhlis et al, 2025, Spillane, 2004). Therefore, the effectiveness of curriculum reform policies is closely tied to contextual readiness and institutional support at the school level.

#### ***4.3.2. Institutional Capacity and Teacher Professional Readiness***

Across the reviewed studies, teacher readiness and professional competence emerged as the most frequently reported determinant of successful curriculum implementation. Approximately ten of the fourteen studies identified teacher capacity as a major influencing factor (Rohmah, 2023; Dewi & Saputra, 2023; Putra, 2023). Although teachers generally demonstrate positive perceptions toward the Merdeka Curriculum, many continue to encounter difficulties in translating curriculum principles into classroom practice.

In particular, teachers report challenges in designing differentiated instruction, developing contextual teaching modules, and implementing formative assessment practices aligned with competency-based

learning objectives. These findings suggest that existing professional development programs remain largely conceptual and have not sufficiently emphasized classroom-based pedagogical practice.

School leadership also plays a critical role in strengthening institutional capacity. Effective principals facilitate professional collaboration, encourage instructional innovation, and support teacher learning communities within schools (Kurniawan, 2022). This finding is consistent with research on instructional leadership, which highlights that school leadership significantly influences teachers' capacity to adopt pedagogical innovations and sustain educational reform (Leithwood & Louis, 2012).

#### ***4.3.3. Pedagogical Adaptation and Implementation Processes***

The findings also indicate that the implementation process of the Merdeka Curriculum remains uneven across classrooms and schools. Approximately seven studies report challenges related to the implementation of differentiated learning, while six studies highlight difficulties in applying formative assessment practices consistently (Sari & Nugroho, 2022; Dewi & Saputra, 2023). These challenges illustrate the difficulty of translating curriculum policy into everyday instructional practices. Although the Merdeka Curriculum promotes student-centered learning and flexible instructional design, many teachers continue to rely on conventional teaching approaches due to administrative workload, limited mentoring opportunities, and insufficient practical training. Variations in classroom practices may partially reflect contextual adaptation, as teachers adjust curriculum principles to local conditions. However, these variations also suggest the absence of consistent operational standards and systematic mentoring mechanisms supporting curriculum implementation (Adoum et al., 2025).

#### ***4.3.4. Variations and Contradictions in Reported Outcomes***

The reviewed studies also reveal mixed findings regarding the outcomes of the Merdeka Curriculum implementation. Several studies report improvements in literacy and numeracy outcomes, particularly in schools that actively apply formative assessment and project-based learning strategies (Hastuti & Widodo, 2023; Pratama & Lestari, 2024). However, these improvements are not consistently observed across all educational contexts. In addition to academic outcomes, some studies highlight the potential impact of Pancasila Student Profile Strengthening Project (P5) activities on students' character development, collaborative skills, and problem-solving abilities (Lestari et al., 2024; Ariani & Hadi, 2023). Nevertheless, the evaluation of character outcomes remains largely qualitative and lacks standardized measurement instruments.

These mixed findings suggest that curriculum outcomes should not be interpreted as direct effects of policy implementation alone. Instead, they reflect the interaction between policy design, teacher competence, institutional support, and contextual conditions within schools. Such findings align with broader research on systemic education reform, which emphasizes that sustainable curriculum change requires long-term capacity development at multiple levels of the education system (Fullan, 2007, Trisnawati et al., 2025).

#### **4.3.5. Implications for Curriculum Reform and Policy Implementation**

The findings of this review contribute to broader discussions on curriculum reform and policy implementation. The evidence suggests that successful implementation of curriculum reform requires more than policy dissemination and short-term training programs. Instead, it requires sustained institutional support, ongoing professional development, and adaptive leadership within schools. From a policy perspective, the Merdeka Curriculum demonstrates potential to support improvements in both academic learning and character development. However, its effectiveness remains contingent upon the alignment between curriculum design, teacher readiness, and institutional capacity. Schools receiving structured mentoring and leadership support tend to demonstrate more consistent implementation outcomes compared to schools operating under resource constraints. Therefore, future policy efforts should prioritize capacity-building strategies, including sustained teacher mentoring, improved infrastructure support, and stronger institutional collaboration mechanisms. Without such systemic support, curriculum reform policies may continue to produce uneven implementation outcomes across educational contexts.

## **5. CONCLUSION**

This systematic literature review examined factors influencing the implementation of the Kurikulum Merdeka in elementary schools using the CIPP evaluation framework. The synthesis of the fourteen reviewed studies indicates that the effectiveness of the Merdeka Curriculum is shaped by the interaction between contextual conditions, institutional capacity, and pedagogical practices at the school level. While the curriculum demonstrates potential to enhance learning quality—particularly in literacy, numeracy, and the development of the Pancasila Student Profile—its implementation outcomes remain uneven across educational contexts.

The findings suggest that disparities in regional infrastructure, teacher professional readiness, and institutional leadership capacity represent the most influential determinants of implementation success. Schools with stronger contextual readiness, access to professional development opportunities, and supportive leadership tend to demonstrate more consistent implementation practices. Conversely, schools operating in resource-limited contexts often experience difficulties translating curriculum principles—such as differentiated instruction, formative assessment, and project-based learning—into classroom practice. These findings reinforce the broader literature on curriculum reform and policy implementation, which emphasizes that educational change depends not only on policy design but also on institutional capacity and sustained professional support within schools.

Beyond summarizing existing evidence, this review contributes to the literature in three ways. First, it provides a structured synthesis of Merdeka Curriculum implementation using the CIPP evaluation framework, allowing a comprehensive analysis of contextual, institutional, and instructional dimensions of curriculum reform. Second, the review identifies dominant implementation patterns and structural barriers

that influence curriculum adoption in elementary education. Third, the study highlights the importance of capacity-building mechanisms, including teacher mentoring, instructional leadership, and collaborative professional learning, in supporting effective curriculum implementation.

These findings have several implications for policy and practice. Curriculum reform policies such as the Merdeka Curriculum require systemic support mechanisms, including sustained teacher professional development, strengthened school leadership, and improved infrastructure support—particularly for schools located in disadvantaged regions. A shift toward practice-oriented training models, such as lesson study, mentoring programs, and teacher learning communities, may better support teachers in translating curriculum principles into effective classroom practice. Additionally, continuous academic supervision and institutional collaboration between schools, education authorities, and professional networks are essential to ensure consistent curriculum implementation.

This study also has several limitations. The review relied primarily on published journal articles and therefore may be influenced by publication bias and limited representation of unpublished empirical studies. In addition, variations in research design and methodological approaches across the reviewed studies may affect the comparability of findings. Future research may benefit from integrating empirical field-based studies and mixed-method approaches to examine the implementation of the Merdeka Curriculum in greater depth. In particular, further studies are needed to develop more systematic evaluation instruments for assessing the impact of curriculum implementation on both academic outcomes and character development through the Pancasila Student Profile initiatives.

The findings of this review suggest that the Merdeka Curriculum holds significant potential as a policy instrument for improving educational quality in Indonesian elementary schools. However, its success ultimately depends on the alignment between curriculum design, institutional capacity, and sustained professional support within the broader educational ecosystem.

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